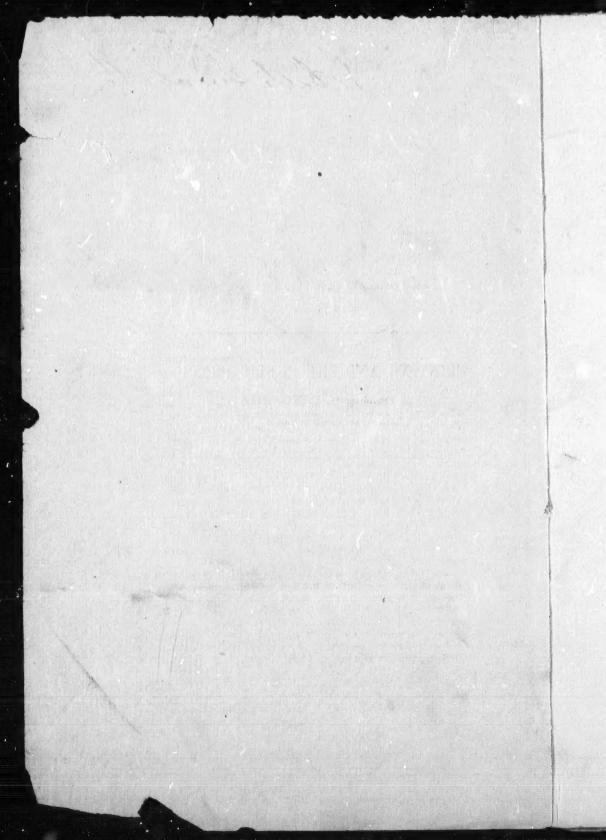
or the day Parley PRINTING AND THE PUBLIC PRESS By the Hon. W. C. HOWELLS American Consul at Quebec



PRINTING AND THE PUBLIC PRESS.

Read before the Institut Canadien de Québec.

December 23, 1876,

By the Hon. W. C. HOWELLS.

American Consul at Quebec.

Of Printing, it is my privilege to speak from experience. From my earliest recollection of the use of letters, it was my ambition to enter the mysteries of this art; and as I passed from childhood to youth, it was my highest aspiration to be a part of the system called the Fourth Estate of modern civilization. In this love of the art, I sought the first opportunity to learn it practically, as a work of my hands, and to apply it in what I should perform as the labor of intellect. I am proud to call myself a Printer; and in the employment of my life I have sought to honor the joint profession of printing and journalism, with what little ability has been committed to me. What I say of it is what I have learned in the relation I have borne to it, as I have read, heard and seen.

The Press, as it existed at the time of my first knowledge of it, as a power in the dual world of mind and matter, was a totally different thing from what it now is, over the entire world; but though in the part of the world I then knew, the condition of the Fourth Estate was in strong contrast with what it now is, the changes have been so gradual that it is only when viewing them together that we properly conceive of the change. Yet, its growth in that period, like the growth of the prominent improvements of the age, has been in the ratio of squares and cubes, rather than ordinary progress. Indeed the development of improvement in all the arts has been by such rapid augmentation, that the wonder it excites is not overpowering, only because all things have kept pace with it; for the last six decades have been the nascent period of more that is truly wonderful than any century of the world's

history.

The history of the discovery and development of the art of Printing is supposed to be familiar to every intelligent man and woman. At least the conventional story of the discovery or invention of the art of printing by Guttenburg, or Faust, or some old German, about the year 1430, is common property; and if we turn to chronological tables, we find that year given as the exact time; as if it was like the birth of a hero, or landing upon a new continent. But the truth is, that the very art whose mission it is to tell of events, cannot inform us, whence, when or how itself came into existence. Our most remote researches into the past, open to us traces of printing. The bricks of which the walls of Babylon were composed, are stamped with the trade mark of the maker, imprinted upon the soft clay; and the ruins of Assyria and Egypt are printed in various way : while all the coinage of the world, ancient and mourn, is printed. But arts do not go stalking about the world unbidden. It is only when they are wanted and called, that they come forth. Inventions are conceived of their mother Necessity, and born of the occasion. They seem to beget one another also, and the birth of one depends upon the advent of another. Thus, though the mechanical principles of printing were known and had been in use for ages, the art did not come forth even into its embryo condition, till the art of paper making had prepared the means of supplying an article whereon to print. And yet the mother necessity had not grown to demand the extended use of such arts. The world was engaged otherwise than in writing and reading. Nor was every man ambitious to own the book he read. The portion of men who could read was small, and the

class that read for amusement and profit was still less. The scribe, with pen and parchment, could amply supply the demand the reading classes created. But in the march of improvement these classes enlarged and their wants increased. The intellectual man began to assert himself as his powers unfolded, till in his fervent love of intelligence, he wooed his hand-maid art and called her from the sanguine fields where war had enslaved her, to bear to the world the power of knowledge. The Press was conceived, and duly grow from its infant beginnings to the ripe manhood of its present magnitude.

The art of making paper preceded the chief attempts at printing. How long, we have no means of knowing; for history does not favor us with any exact statement of the time when either began. We learn the relative dates in the incidental records of the times, much as we read the dates of the "everlasting hills" in the strata of a broken mountain side. But it seems as if some overruling design had delayed the invention of printing with moveable types-for that was really the art-until paper was a common and well understood manufacture. Till then it would not have been useful, and might have been thrown aside as an idle play thing. Without paper, abundant and at a moderate cost of production, the art of printing was worthless. So in a later day: the power press was impracticable, till the composition roller was invented; and without the papermaking machine, the power press was a useless outlay of genius and capital. And at this time, the railway and electric telegraph bear a like indispensible relation to the Daily Press of the present; for now they are all parts of but one system from which you cannot remove either.

Accepting the commencement of the fifteenth century as the era of the art of Printing, we can but remark the rapidity with which it came into use, and how widely it spread over the civilized world in a few years. A third of the century had passed, when Bibles were offered for sale in Paris, by a German who was thought to possess the process of producing them as a secret—which secret, the story is, the authorities squeezed out

of him, by charging him with witchcraft. Before the century had elapsed, the art was the common property of every country of Europe; and men were filling their libraries with printed books. The forms of letters had been settled, a suitable ink had been compounded, a mode of applying it had been sought out, a press had been constructed, and the process of casting the separate types from a cheap and conveniently prepared metal, adopted. This arrangement comprized the art, and this was found sufficient for the performance of good printing. Thus equipped the art was looked upon as complete. The three succeeding centuries passed before any material improvement was made, either in the style or cut of the letter, the press, the ink or the manner of manufacturing books or printed matter. The general style of the books that have come down to us from the sixteenth century is as good as those of the eighteenth. The paper used in the older books is generally of better color and quality, and the color of the ink altogether superior to those of eighty years ago. So of the binding. We are impressed with the excellent printing of the books of the seventeenth century, compared with those of the eighteenth; for the general style of the execution appears to have deteriorated rather than improved. There were of course exceptions both ways; and the productions of different countries were unlike. This was largely due to the times and the temperament of the peoples who did the work. The patient Hollander of 1650 was necessary to the production of the famous Amsterdam editions, to whose beautiful style the utilitarian Englishman was indifferent. At the point of advancement in the art with which it entered the sixteenth century, it continued until the nineteenth-varied only by the skill with which certain masters executed particular editions. Through all this period there was no change of cut of the Roman letter. The same style, which is the established form of the Latin Alphabet,—(to which we have returned for our finest books, from the once admired "Scotch faces" and "French styles")-prevaled. The graceful style of that standard ent was attained at a very early day; and many of the famous editions have not since been excelled, in the qualities of correct composition, fine color of the ink and clear, even impression. Indeed our type founders of this day give the old style a first place in their published specimens—dressed up a little in some respects, but not materially improved. The great object sought by the old printers was to achieve correctness and good impressions. The more showy elegance of the present time they never aimed at. Their highest conception of splendid printing seemed to end in the illuminating of a title page or initial letter with red ink. or an engraved device. The glory of their work was faithfulness. You may see this, if you hold the leaf of a book between you and the light, and observe how evenly one line is printed on the back of another,

or if you note the uniformity of color.

But with the present century came a world of im-provements in Printing, Type Founding and Paper Making-all growing rapidly together, with increasing demands and the spirit of the age. The old Hand Press, from whose dingy frame had radiated the brightest scintilations of centuries of thought and by whose means profoundest results of human wisdom had shown upon the world, as that world advanced, became an impediment in the way of what was required by the progress of the times. Though the stereotype had been discovered, and thus the means of multiplied impressions, by the use of many presses, had been secured; the rapid production of impressions from one form hastily set up, from matter gathered at the last moment, so as to supply a vast reading public without delay, was impossible with any thing short of the Power Press. Such a machine was indispensible; and yet there was an impediment to its development in the want of a proper inking roller. With the hand press, puffy balls of buckskin or parchment pelts, stuffed with wool, had been used to spread the thick printing ink by beating it upon the surface of the types at each impression. This was a good and convenient process by hand; but it could not be made to work in a machine. Leather rollers were tried without success; and the coming-forth of the power press halted, till one lucky day it was discovered that a mixture of glue and molasses melted together, could be cast in a round mould, after the manner of a candle, with a wood or iron core in the middle, that when cooled would make a roller of any desired length or diameter, with a smooth elastic surface, and be the best possible substance for putting the ink upon any form. This known, the printing machine was brought into immediate use; and thence forward the Daily Newspapers had no limit but the public demand. Still, to print by machinery and make paper by hand was useless; for the paper mill could not keep pace with the printing office. But the genius of the age was equal to the emergency; and by the time the power press was fairly in operation, a machine had been made that would produce a sheet of paper of indefinite length, with a capacity of production equal to the supply of

any conceivable demand.

For more than three hundred years all the printing of the world was done on presses that were substantially all alike. The pictures of the old printing presses are familiar to every reader-whether they be of that on which Faust is represented as taking his first proofs of the Bible, or the one exhibited last summer at Philadelphia, because it is supposed that Franklin worked on it when a journeyman printer. They are good portraits of the machine on which, for that long period, mind depended for its great power of utterance. I know that they represent one on which I have more than once blistered my hands, when playing the Franklin on an old Ramage press, as it was called. I dare say they have been in use within the remembrance of many in this Province. To work on these presses required two men-one to beat the ink upon the form of type and the other to pull the impression. Two hundred and fifty sheets, (a token) was an hour's work for two expert hands, who alternated each hour. Eight tokens made a day's work; and I can testify a hard one.

At this rate, or slower, the printing of that three hundred and fifty years was performed. The workmen were mostly men who had served regular apprenticeships to their trade, and their work was usually well done. The art was regarded as of a higher grade than a mechanical calling; and they who learned it were ex-

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pected to be qualified by more than ordinary education, before being accepted as apprentices; and those of noted proficiency were accorded a professional rank. But doubtless the printers, who were the best workmen, were the quiet, faithful, though obscure geniuses whose names never appeared in imprints. Theirs was the unproclaimed honor of being faithful "over a few things." In the true love of their calling, they found their reward in their daily bread and duty done. The laborious department of press-work could have been performed by more illiterate men; but the whole art was regarded as unit; and printers were required to set the type, or make the impressions, as the case required, tho' in the larger establishments the work would necessarily be divided into departments. For a time the art embraced the casting of the types and making the ink. At all times it was a trade that required capital; and therefore could not be readily set up every where. Until local newspapers came to be required, the printing offices were mainly connected with booksellers' houses or institutions of learning and departments of State.

The old books produced for a long time after the introduction of the art were what we would call plain. Their beauty consisted in their correctness, clear impression and good color of ink on white paper. Occasionally a title page would frame out with red letters, or a grotesque design would head or close a chapter or surround an initial letter. But the art of raised engraving was so imperfect that there was no temptation to use it ornamently, as it lent no beauty to the work. But the best work of the early days would be good work now. The bad printing done upon hand presses was really more general in later times, when the prices of labor had increased and there was an effort to cheapen the work.

As long as the printing of books was the sole employment of the press, it exerted comparatively little influence upon the intellectual world. The art was only a beast of burden for the learned and the makers of books. In this capacity it served the world through two centuries at least. At an early day there was an attempt at the newspaper of regular issue in many of the cities of Europe, but without real success, till the about

the year 1700, whence forward the newspaper took its place in the business of civilized life. First periodical issues of tracts, political and theological came, into use; then Official Gazettes, Public Advertisers, &c., in the interest of trade, came to be the channel through which public information, current news and political movements were presented to the people. By the middle of that century, the pamphlets and periodical papers on special subjects had settled into regular issues of monthly, weekly or daily periods. The newspaper of a city then became the chief avenue through which the thinkers of a community approached the public on general subjects; and soon the larger towns and even villages aspired to the use of this convenience. This was a phase of newspaper enterprize that was eminently intellectual. It was rather a joint stock operation of small authorship. It saved the writer the cost of printing and circulating his thoughts, while it opened the way for more or less careful thinking and writing. The newspaper was rather a circulator than originator of opinion-especially in the smaller places. Of itself it rarely attempted to make any public sentiment. In this respect the paper was nothing on its own account. It made few if any editorial notes or remarks, much less essays or discussions. Indeed many a newspaper made no pretence to have an editor at all. It was made up by the Printer, who collected news as he could, copied from other papers or the news budgets of ships. If a contribution was made by a local writer, it was addressed to Mr. Printer, or To the Printer of the Advertiser. Mr. Printer rarely said any thing to his correspondents or about them. If they took untenable ground on any question, there was somebody ready to take the opposite; and the printer accommodated both and all sides-limited of e arse by his spare room. I' controversies arose, writers were given space and were left to flail away at each other to their heart's content, as well as the amusement of readers. Newspapers so conducted, were doubtless interesting sheets, small as they were: and few of them were over medium size, that is 19 by 24 inches square. Such served the purpose in Europe and America till a period "within the recollection of the oldest inhabitant," at

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any rate. In this period of newspaper development, the term Public Press came into general and correct use, as signifying a press in which the public could hear and be heard. For the tradesman there was the advertising department and commercial news for them to contribute to or read; for the gossips there were the births and deaths; for the young ladies the marriages; the poets' corner for the rhymsters; and the general news and politics for whom it might concern; while the little remaining space went to anecdotes, etc. Through this medium, whoever thought expressed himself; and thus the habit of thinking and writing grew upon the people till it came to be more than the mere work of book-wrights. The recognized value of the press in this form gave it a consequence that was new and increasing. Printing offices sprang up in every town; and it was a very tame village that did not assert its right to starve a printer. In the very nature of things this was a business that paid but poorly. The profits of the public printer depended upon the number of patrons, as he politely called them, but many of whom were more properly retainers; and he was tempted by his hopes to deliver a large part of his issue without pay and make little debts that he could never collect; and as a consequence he became proverbially poor-to which it was the too common practice of these printers to add the humor of joking over their poverty, and thus accepting the situation, till half the newspaper readers seemed to regard it as the proper thing to withhold their just dues. With such treatment the profession of Village Printer fell into poor though honorable repute.

The freedom with which every calling was pursued in the English American colonies was favorable to this use of the press; and by the time of the American Revolution, the country was well provided with this means of intercommunication. The active men of that period did not neglect to use the press as a means of forming public opinion and preparing the sentiment of the people for the assumption of their independence. It soon became one of the necessities of the American public, both in the New States and in Canada; where it has maintained this local condition in the rural situa-

tions of both countries.

With the use of Newspapers in the politics of a popular government, they take on a kind of personality, by which every paper becomes an organ of some party or interest; and the editor finds it his business to fashion the expressions of the organ and make them representative of the party to which it belongs. In this way he assumes a higher character than belonged to the Mr. Printer, who had been the mere mouth-piece of those who met in his paper. He now came to take part in or direct the discussions of his journal, directing and expressing the complex views of his party, under the term editorial; in which capacity, with great propriety, he used the plural pronoun we. In the "make-up" of the paper, a special department and heading was assigned to what he wrote or as sometimes happened, what he fathered. The editor was held to have prepared these articles, and being responsible for them, was occasionally treated to the luxury of a thrashing or dilema of a challenge, by way of cheap martyrdom for opinion's sake, to say nothing of the libel suits in which he was at times involved. The courts very properly held that the printer of a libel was liable to the sufferer from it; and editors, publishers and printers acted upon the understanding that if they made libels public, -whether of their own writing or not,-they must fortify themselves with responsible names. The law, of libel, no doubt had a wholesome restraining effect upon publishers; but apart from such considerations, the honor of the craft, including all the workmen of a printing office, was always placed upon high grounds; and confidence was usually accorded to it. The famous Letters of Junius furnish a case in point, where fine upon fine, and endless suits failed to bring out the author, who with his publisher died with the secret of the authorship. The power and favor of Princes have failed to penetrate the secrets of the printing office; where the confidence of authors has ever been sacredly regarded by the craft. At the same time printers have maintained the greatest liberality and impartiality in serving the public. Even when particular papers came to support the interests of a party, the printers thereof have been impartial and fair to opponents, printing for them and preserving their secrets.

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The printing office of the times of small papers and the hand-press, as it was when I first knew it, was an institution peculiar to itself. Though a concern of some pretension, it was limited in size and means, and mostly occupied but one room, -large, lighted with plenty of windows, and if possible, it was some where up stairs. The master printer, who was usually the editor of the paper also, would have a table and desk in one corner of the room, where he opened his exchanges and wrote his editorials. Here he also had a chair or two, where the gossips who came to tell the local news and read his exchanges, made themselves at home, and interrupted him and his work by their discussions of party prospects and plans and the politics of the country. Opposite a window stood the press, around the walls were ranged the cases of type, and in the middle of the floor the imposing stone, a slab on which the forms of the paper were made up. The "hands" or workers of the office were commonly an old journeman printer, who remained in employment as long as he was needed or was content to stay, and who when out of a place, travelled from town to town, seeking work and picking up additions to his store of experience; also two, but rarely three, apprentices - the younger of whom was condemned to perform the minor services and rough work of the concern under the irreverent soubriquet of the Devil. These three or four spent their idle time in the office-made it their home in fact. Here they read the papers received in exchange; read and discussed the communications and the writers, as well as public affairs, with which they were well acquainted; criticised the visitors to the office and public men of the vicinity; and in the absence of the editor, sat around his table to talk over public matters as if they had them in charge. It is a fact we often loose sight of, that what we call a great subject is about as easily managed as a small one. It is the complication of a subject that makes it difficult, rather than its vastness. : A steam engine is quite as easy to understand, to construct and manage as a watch. A Province or a State is no harder to govern than a city; and a Congress of nations may only exceed in the extent of its relations, a meeting to settle a parish

quarrel. We can always compass what we study and learn to understand. These printing office boys took up the nation or the world as their lesson; they studied it as an incident to their daily labors; they made themselves familiar with the busy movements of mankind; so that the grand operations of kingdoms and empires scon became to them matters of no more importance than the details that went to make up the manufacture of a suit of clothes in the adjoining tailor's shop. They acquired a breadth of view when they looked outward; their scope of observation was expanded, and they learned to think on a grand scale and of all things. It was to them a liberal education, though an informal one. If a boy in a printing office had genius or talent it came forth and was nurtured by even meagre opportunities of this kind. They seemed to have entered the guild of letters and to belong by right to the fourth estate. The printing offices became colleges without a prescribed curiculum. Their defect was the want of system; but genius and experience supplied much of that. The intercourse of these printers was free from restraints, and they learned of and instructed each other, and also gathered the waifs of information dropped by the loungers and talkers of the common room of the Office; and these latter were often of the best cultivated minds of the town. The eminent Statesman, the aspiring, the successful leader of opinion and the man whose affection for letters attracted him-all came before these young printers as models, each furnishing material to stimulate as well as satiate their powers of intellectual absorption. They necessarily grew clever, and even brilliant if they had capacity. Great men have emanated from these printing offices, who had few other opportunities of mental culture. A long list of distinguished names might be presented as instances, even in the new country of the United States, -beginning with Franklin, but not ending with such men as Horace Greeley, Simon Cameron, Thurlow Weed, Bayard Taylor, Charles Brown (Artemas Ward,) Samuel Clement, (Mark Twain,) and many other well known names, 1

¹ M. H., aurait pu mentionner son fils, W. D. Howells, auteur de plusieurs volumes bien connus et rédacteur de la principale revue littéraire de l'Amérique, comme étant l'un des gradués du bureau des impressions.

that might be cited. It did not follow that all these graduates of the printing office became greatly distinguished men, any more than those who have taken home their university parchments; though the comparative proportion shows well for the printers. Many of them never aspired to be any thing else than printers, as thousands devote their lives to the art from a love of it. The system of newspaper exchanges brought to every office more or less of the best publications of the times, and all the current material for reading. This supplied them with a vast amount of solid information and an endless fund of stories, anecdotes, puns, bon mots, rapartee and wit in all its phases. These they learned to handle skilfully; so that in conversation they were roady and piquant. I have never heard more brilliant talks than I have heard in a printing office. They learned to write well; and the peculiar style necessary for successful newspaper writing belonged to them of right. This was but natural. It is a heritage of the Fourth Estate that lawfully descended to them; and it is a talent that printers have seldom buried or hid in a napkin. The mass of the good writers on the city newspapers of America of the present time have been graduated from the small printing offices of the country, where boys who could but read, have developed into scholars, with an unrivaled readiness in the production of the matter best suited for the daily reader. They comprehend at once the detail and the compilation of the newspaper; they can therefore produce the materials to enter the make-up of a paper, and frame them together as literateurs cannot do; and in short, they supply a want that no others can. With such a class to conduct it, the growth of The Press to its present proportions has been most natural.

Considering as I do now, the condition of the *Press* in America chiefly, the time of the introduction of the art into the New World is a pertinent question, though somewhat difficult to answer. It seems however to be pretty well established that the first printing press in North America was set up in the city of Mexico; where it was used as the property of a monastry. This was some time before New England was settled by the

"Pilgrim Fathers," among whom one of the first uses of the press was the production of the Eliot Bible for the Massachusetts Indians. With the growth of the settlements we hear of presses in different parts of the country. Newspapers grew up in the last century, and took their place as an institution of the country in due time. Weekly papers supplied the smaller places, and a few dailies were issued in the rising cities, where they grew with the population, or requirements of trade.

As long as printers were confined to the use of the hand-press, it was impossible to extend morning or evening issues to any thing like the present volume. One hand-press, with two men at a time, working to the extent of their ability, could not produce more than six thousand impressions in each twenty-fourhours. The present issues of many American city dailies -the New York papers for instance-often exceeds twenty-five thousand copies, all printed within three or four hours; while the sheets are six to ten times as large as those formerly worked by hand. The daily press of the hand-press days was only an increased issue of the small weeklies that sufficed for our grand fathers of the rural districts. But all the daily papers in America, say up to 1810, were a mere handful, compared with the present list. The great mass of news readers were content with weeklies; and of those who read dailies there were very probably ten readers to a paper. London furnishes a good example of this condition of dailies; where a dense population, in the exciting times of the wars that kept Europe in a ferment at the close of the last and beginning of this century, was clamorous for news; which had to be supplied from the multiplied issues of the hand-press. There it was not unusual to resort to the expedient of setting up the forms of type in duplicate and employing four presses with relays of pressmen, to meet the demand. In addition to this the readers economised the papers as we should not think of doing. The daily papers were "taken in," as the English say, by the reading rooms, and public houses, where they were read aloud to listening groups many times over; and after they became stale at one house, they were sold at second hand to a cheaper place, where

a poorer class absorbed the contents. With such expedients as these, the wants of the public were in a manner supplied by the slow means then at hand; and the reading public was content and happy, rejoicing in their wonderful facilities for looking over "the map of busy life." Then the enterprising newspaper boastfully told that its proprietors had secured the landing of a swift boat at a near point, with the news of the last great battle, and how fleet horses carried the dispatches overland in a few hours, and how they massed a force of printers at midnight and at day light laid the important news before the public in less than a week from the event,—and never dreamed that they might live to read at breakfast the last might's dispatches from around the whole earth.

But the world was growing, man was enlarging his sphere, and all his wants were expanding. The ever present Necessity called forth her child Invention to the work. The Power Press, the Stereotype plate, the Paper Machine were produced; and the means of supply became all that the demand could ever require. Then the power of human expression was indeed unfettered. Men could make known their thoughts as they willed, and intelligence waited only to be received. All the books could be made and all the periodicals issued that the entire world was prepared to read. Still this, which seemed to be the ne plus ultra of the art was not perfection, or the kind of perfection that we enjoy. But there waited to join the train, in the triumphant march of the Fourth Estate to its grandest domain,-the Railway, the Telegraph and the Photograph. These unite as if by elective affinity to produce the results we contemplate in The Press of our time,—an institution that once would have been thought magic; that within my own recollection, would have been called impossible. and which to-day creates no astonishment; because it has so entered every household with its marvelous

We sometimes imagine the spirits of the great of other days coming back to earth to note the contrast of the times. I have contemplated in fancy, one of the fathers of this art,—Aldus or Caxton,—watching the

preparation and issue of one of our great morning Dailies. I can imagine the spirit of Father Caxton rising from the shawdowy past, to look upon the workings of the art he loved, and see what four hundred years had wrought of progress in a process that he was supposed to have completed, with his cast metal types. see him, (inspired by a wish to know how far the art had blest mankind,) coming down to a land unknown in his time, where forty millions of men speaking his tongue, spread over a continent risen to fill the place of the lost Atlantis. He has alighted in the midst of a great city. It is night-fall; and he betakes himself to his beloved Printing Office, one of the thousand in the place, but one whose proportions are multiplied an hundred fold to any he had ever seen. He sees the same types, in the same cases, and distributed in the same order as when he used them; and the workmen are taking their places, each with the old composing stick and rule, as the printers of old were wont to use. They are for a night's work; and each compositor, before he begins, touches a little point with a lighted taper, and there flashes before him a new illuminating power, and reveals to the astonished ghost a modern composing room. The editors are at work in another apartment preparing the morning edition; a messenger brings the copy to the printers, where it is divided among them; in a few minutes it is all in type and they wait for a new supply, which is disposed of, till column after column is composed, proof-read and corrected; and there is before him a mass of reading, made up of news, editorials, correspondence, commercial and shipping intelligence, miscellaneous selections, poetry, advertisements, etc., equal to a year's work of his day. He inspects the matter, is attracted by the head "Despatches," each item beginning with a date that is the present time; and he reads before the same date,-London, Paris, St. Petersburg, Rome, Alexandria, Calcutta, Canton, Yeddo, and other places from as wide a world beside, to him unknown. It is now "the very witching time of night," and the clock points towards one. The last regular telegraph dispatches have been set up and the "latest" are waited for, while the forms are prepared. He curiously watches

the foreman as he builds up these columns into eight great pages; and when they are locked up, he turns to find the press on which they are to be printed. But instead, he sees them placed in a sliding elevator, and a workman taking his place with them on the platform to descend through four or five stories, to the underground floor; and he goes along to witness the process. There he sees hese pages covered with layers of soft damp paper, which is pressed into the uneven surface of the types, till a perfect mould of every word and letter is made upon it, and it is lifted off, a complete matrix. He recurs to his effort to east the first metal types, and the travail in which he devised the means to cast a single letter; and hi- wonder increases as he sees this paper mould, within a few minutes, dried and made ready to receive the moulten metal, which in a moment more will be a solid plate of the size of the whole page, bearing every letter and every point of the form. He beholds with admiration these eight pages cast, one after another, the last delayed a few minutes for the latest dispatches, and notes that it is now past one o'clock. He sees these plates taken up and carried forward to a grand apartment, formed under the street of the city, where they are bent to a perfect curve, around a large cylinder and made fast to its surface. Wonderingly he follows the workmen, as with cranes they lift this cylinder into its place in a vast machine, made up of rollers wheels and springs, so combined as almost to have the movements of life, and it dawns upon him that this is the press. At one end of it he observes a continuous sheet of paper a yard in width and hundreds long, rolled upon a cylinder; and his eye follows the process, as the end of this sheet is led along between guiding rollers till it passes over and around the cylinder covered with the plates of type, which are inked by those mysteriously flexible rollers, so important to the power press, - and thence directed through revolving shears, that cut off the sheets, fully printed on both sides, and whence they are passed into machines that fold them for the mails. The entranced spirit of this old Father of the Art looks on, and sees thousand after thousand of these immense journals thrown off, folded, wrapped, directed and mailed; and

long before the day-break cock crows, he has seen trains that baffle his very conception of mechanics, by their locomotion and their speed, start off with these mails, bearing these improved " maps of busy life," to greet with the rising sun, their expectant readers miles and leagues away. And well may he delay his flight till the cock crows, and contemplate it all. He has seen these mamouth sheets fall like the flakes of snow, has wondered over every step of the process of their manufacture, their superior execution, their variety and number. He has seen these sheets made up since the night set in; and like the fabled works of magic, it is the labor of a night; though it goes on and is repeated day after day, night after night, as if for all time, reciting the story of each day of the world's life to the world itself. He has seen the news of the day, in one hour, gathered from the ends of the earth, multiplied a myriad times and told again to a nation in a night. In short, he has seen, in the slow. world of matter, so near a realization of his spirit home, that he might well doubt if he had left it, did not the messages he has seen called up and dispatched, tell such tales of woe and sorrow - tell so vividly that they belong to earth, and are the work of mortals.

And the result of the second o